

KENTUCKY DEPARTMENT OF EDUCATION

STAFF NOTE

Review Item:

Implementation Plan/Timeline for HB 93 on mathematics initiatives

Applicable Statute or Regulation:

House Bill 93 (2005 General Assembly), KRS 158.6451

History/Background:

Existing Policy. In 2005, the General Assembly passed HB 93, comprehensive legislation designed to address the need for proficiency in gateway skills. This review item focuses on the mathematics work in progress as a result of the legislation.

Committee for Mathematics Achievement

One part of the mathematics aspect of the bill was the establishment of a Committee for Mathematics Achievement. This committee is charged with developing a strategic plan for addressing mathematics achievement across the Commonwealth.

The Committee membership was expressly delineated in the bill. The committee is to be comprised of:

- the Commissioner of Education or designee;
- the President of the Council of Postsecondary Education or designee;
- the Executive Director of the Education Professional Standards Board or designee;
- the president of the Association of Independent Kentucky Colleges and Universities or designee;
- the secretary of the Education Cabinet or designee;
- a representative with a specialty in mathematics or mathematics education who has expertise and experience in professional development, especially with coaching and mentoring of teachers, from each of the nine (9) public postsecondary education institutions defined in KRS 164.001, selected by mutual agreement of the president of the Council on Postsecondary Education and the commissioner of education;
- two (2) adult education instructors selected by the vice-president for Kentucky Adult Education;
- two (2) elementary, two (2) middle and two (2) high school mathematics teachers, appointed by the board of the statewide professional education association having the largest paid membership with approval from their respective local principals

- and superintendents of schools;
- and three (3) school administrators representing elementary, middle, and high school, appointed by the board of the statewide administrators' association having the largest paid membership with approval from their respective local superintendents of schools.

The members of the committee as appointed are included in Attachment A.

The committee received a very specific and detailed charge in the legislation. Its duties are to develop a multi-faceted strategic plan to improve student achievement in mathematics at all levels of schooling, pre-kindergarten through postsecondary and adult. At a minimum the plan shall address:

- (a) Challenging curriculum that is aligned pre-kindergarten through postsecondary, including consensus among high school teachers and postsecondary education faculty about expectations, curriculum, and assessment;
- (b) Attitudes and beliefs of teachers about mathematics;
- (c) Teachers' knowledge of mathematics;
- (d) Diagnostic assessment, intervention services, and instructional strategies;
- (e) Shortages of teachers of mathematics, including incentives to attract strong candidates to mathematics teaching;
- (f) Statewide institutes that prepare cadres of mathematics leaders in local school districts, which may include highly skilled retired mathematics teachers, to serve as coaches and mentors in districts and schools;
- (g) Cohesive continuing education options for experienced mathematics classroom teachers;
- (h) Closing the student achievement gap among various student subpopulations;
- (i) Curriculum expectations and assessments of students among the various school levels, pre-kindergarten, primary, elementary, middle, and high school;
- (j) Content standards for adult education centers providing mathematics curricula;
- (k) Introductory postsecondary education mathematics courses that are appropriate to the wide array of academic programs and majors;
- (l) Research to analyze further the issues of transition from high school or GED programs to postsecondary education mathematics; and
- (m) The early mathematics testing program under KRS 158.803.

Other factors may be included in the strategic plan as deemed appropriate by the committee to improve mathematics achievement of Kentucky students.

Statewide Professional Development

Under section (f) above, the committee is also charged to design a statewide professional development program that includes summer mathematics institutes at colleges and universities, follow-up, and school-based support services, beginning no later than June 1, 2006, to prepare teams of teachers as coaches and mentors of mathematics at all school

levels to improve student achievement. Teachers shall receive training in diagnostic assessment and intervention. The statewide initiative shall be funded, based on available funds, from the Teachers' Professional Growth Fund. The design shall:

1. Define the curricula focus;
2. Build on the expertise of specific colleges and universities;
3. Place emphasis on mathematics concepts, skills and relationships, diagnostic assessment, intervention services, and instructional strategies;
4. Identify quality control measures for the delivery of each institute;
5. Establish evaluation procedures for the summer institutes and the other professional development components;
6. Provide updates and networking opportunities for coaches and mentors throughout the school year; and
7. Define other components within the initiative that are necessary to meet the goal of increasing student achievement in mathematics.

Mathematics Achievement Fund.

Once the professional development model has been designed by the Committee on Mathematics Achievement, funds will be made available for two-year grants to school districts to support participation in the program. The Mathematics Achievement Fund also supports the operation of the Center for Mathematics. The Center will be established at a Kentucky university through an RFP process.

Regulations Promulgated by the Kentucky Board of Education.

Additionally, the committee shall make recommendations to the Kentucky Department of Education and the Kentucky Board of Education for criteria to be included in administrative regulations promulgated by the board which define:

1. Eligible grant recipients, taking into consideration how this program relates to other funded mathematics initiatives;
2. The application process and review;
3. The responsibilities of schools and districts, including but not limited to matching funds requirements, released or extended time for coaches and mentors during the school year, continuing education requirements for teachers and administrators in participating schools, data to be collected, local evaluation requirements; and
4. Other recommendations requested by the Kentucky Department of Education.

Staff at KDE has developed a timeline to guide the committee in accomplishing its charges. That timeline is provided in Attachment B.

The legislation directed the Commissioner of Education and the President of the Council on Postsecondary Education to agree on an appointment of a temporary chairperson for the committee before its first meeting. Bill Bush from the University of Louisville was appointed as the temporary chairperson.

The Committee held its first meeting on May 6, 2005. At that meeting, the committee members were introduced, the history of the legislation and its charge to the committee were discussed and subcommittees were formed to address the problems and challenges

that are affecting mathematics achievement at different levels of education. Subcommittees were formed to address the issues at the elementary school level, the secondary school (middle and high) level, the university and adult education level, and, since the bill directly addresses the need for coaching/mentoring programs, a subcommittee was formed to address that area.

The second meeting of the committee was held on June 3, 2005. The morning session of that meeting was a work session for the subcommittees to address and summarize the issues that they discovered at their levels. Each subcommittee was to develop four or five priority areas for the committee as a whole to consider as a priority area of concern. During the afternoon session, each subcommittee reported on their work, the committee as a whole discussed the priority areas presented and through consensus, the committee as a whole developed four priority areas that they determined should be addressed in the strategic plan they have been charged to develop. The priority problem areas are a work in progress and will be addressed again at the next meeting of the Committee.

Policy Issues:

- What feedback or comments would the Kentucky Board of Education like to relay to the Committee on Mathematics Achievement?
- How can the Kentucky Board of Education best support the work of the Committee and other work associated with this legislation on the timeline?
- What advice does the Board offer on how to proceed with the regulatory process?

Impact on Getting to Proficiency:

Proficiency in mathematics is critical to achieving overall proficiency by 2014.

Contact Person:

Starr Lewis
Associate Commissioner, OAPD
564-2107

Deputy Commissioner

Commissioner of Education

Date:

August 2005